

INVESTIGATING THE IMPACT OF THE YEAR 2000 PROBLEM

Y2K SOLUTION APPROACHES

There are multiple solutions to the problem. Each has some merit, such as quick implementation time, and some drawbacks, such as limited ranges of applicability. For a relative comparison of these techniques and how long they take to implement, see figure 1¹.

- *Data-date expansion*: Convert all two-digit dates to four digits in the data files.
- *Software-date expansion*: Handle the date expansion requirements in the software doing the calculation.
- *Compliant commercial software*: Purchase Y2K compliant software that meets your needs.
- *Binary date encoding*: Modify the software to represent dates at the bit level. Two bytes, or 16 bits, can account for over 65,000 years.
- *Database duplication*: Develop two- and four-digit versions of databases to work with compliant and non-compliant software.
- *Redevelop software*: Redo the application software so that it becomes compliant.
- *Year interception*: Catch all date calculations and replace erroneous results with correct ones.
- *Windowing*: Choose an appropriate year, for example 1950, and process all years between 50 and 99 as 20th century dates, all years between 00 and 49 as 21st century dates.
- *Year shifting*: Use the 28-year cycle of the calendar and shift dates until all dates that need to be processed are in the same century.
- *Manual*: Reinstitute non-automated processes.

¹ "Year 2000 Survival Guide," Edmund X. DeJesus, BYTE Magazine, July 1998, p. 53.

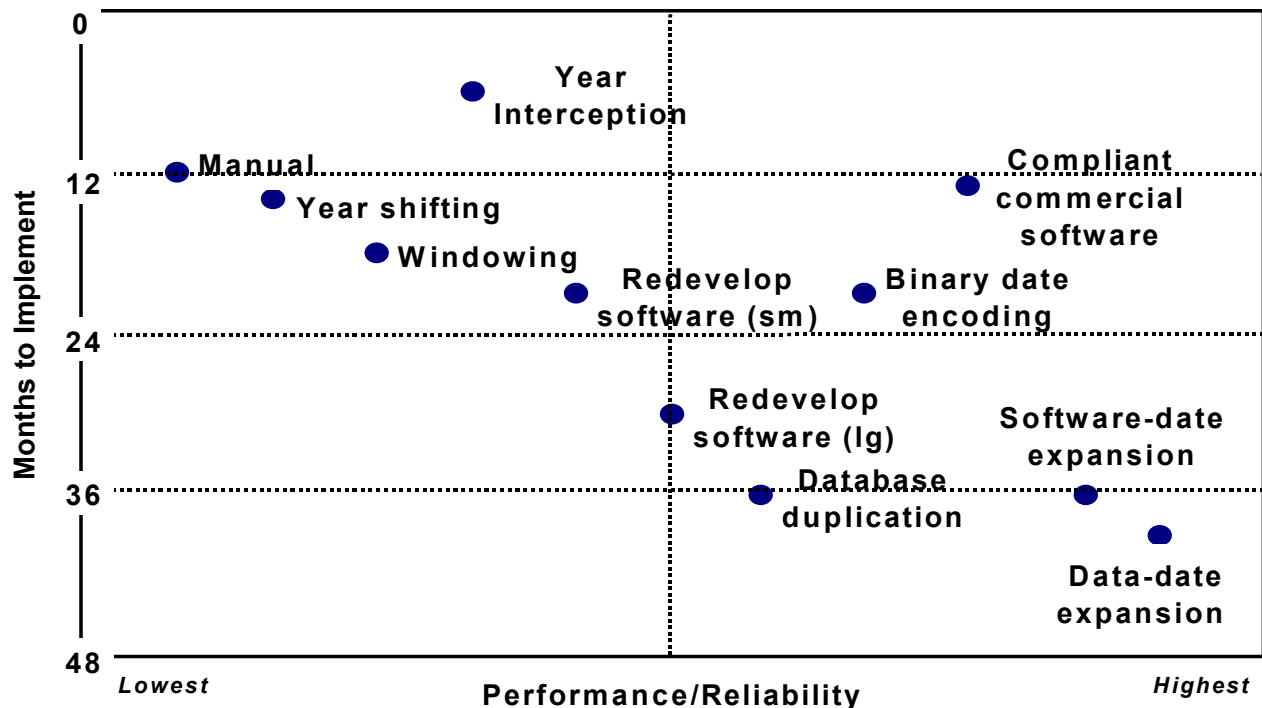


Figure 1. Relative Comparison of Y2K Solutions